



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

JRL-3670-57

Application Number

10/528,776

Filed

August 19, 2005

First Named Inventor

Dupcinov

Art Unit

2618

Examiner

Chan, Richard

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ Applicant/Inventor

☐ Assignee of record of the entire interest. See 37 C.F.R. § 3.71. Statement under 37 C.F.R. § 3.73(b) is enclosed. (Form PTO/SB/96)

☒ Attorney or agent of record 33,149
(Reg. No.)

☐ Attorney or agent acting under 37CFR 1.34.
Registration number if acting under 37 C.F.R. § 1.34 _____


Signature

John R. Lastova

Typed or printed name

703-816-4025

Requester's telephone number

February 5, 2009

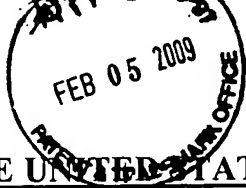
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.*

☒ *Total of 1 form/s are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and selection option 2.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

DUPCINOV et al.

Atty. Ref.: 3670-57; Confirmation No. 8029

Appl. No. 10/528,776

TC/A.U. 2618

Filed: August 19, 2005

Examiner: Chan, Richard

For: A METHOD FOR USE IN AN AD-HOC WLAN SYSTEM

* * * * *

February 5, 2009

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

In a telephone call with the Examiner on January 26, 2009, Examiner Chan indicated that the rejections under 35 U.S.C. §112, first and second paragraphs were overcome in the response filed November 7, 2008 entered for purposes of appeal. Written confirmation of same is requested. Thus, the only outstanding rejection is that of claims 1-8 under 35 U.S.C. §103 based on Nuemiller, Liu, and Balogh. This rejection is traversed based on the following clear errors.

The technology in claims 1 and 4 relates to WLAN ad hoc networks. A first node maintains a list or table of other nodes within the ad hoc network which can be used for forwarding messages within that network. Rather than listing weak nodes which are not desirable forwarding candidates, the first node lists strong node candidates in its ad hoc network routing table so that packets from the first node are routed to one or more "strong" neighboring nodes, each strong neighboring node in turn having a list of strong candidates neighboring it, and so forth. In addition to listing strong candidates rather than weak candidates, the received signal strengths or qualities (e.g., SNR) of signals from nodes in the list are analyzed differently from the received signal strengths or qualities from nodes not on the routing node list. The received signal strength or quality from a listed node is allowed to vary somewhat within a predetermined range above a first threshold value to accommodate normal fluctuations associated with a moving node. But if the received signal strength or quality of the listed node falls below the first

threshold level, then that node is removed from the list. In contrast, the received signal strength or quality of an unlisted node must exceed a second higher threshold level in order for that unlisted node to be added to the routing table. This arrangement provides a robust system where the list of nodes in the ad hoc routing table is updated based on changing channel conditions to ensure good signal quality routing connections.

Nuemiller Does Not Determine If The Second Node Is Already Listed In The Table Maintained By The First Node Or Determine Signal Strengths In Addition To Many Admitted Missing Claim Features

Nuemiller describes various nodes flooding each other with broadcast routing table information that is only used if another nearby node is within radio range of the broadcasting node. The Examiner cites col. 7, lines 55-59 as allegedly teaching “if the second node is already listed in the table maintained by the first node.” That text at col. 7, lines 55-59 states: “Overall, a mobile terminal 102 in an ad-hoc network 100 will usually maintain a collection of routes to any given host, so that if one route is lost the other routes can be used. The embodiments of present invention take advantage of this knowledge in a pro-active manner.”

A table/collection of multiple routes to any given host is not the same as actually determining if a second node is already listed in the table maintained by the first node. There is no decision in Nuemiller about whether to include or discard a node from the routing table depends on whether that node is already listed in the routing table. Nor does Nuemiller analyze received signals to determine their signal strength. The signals are either in range and received or they are not. The actual signal strength of a received signal from a neighbor node is not a concern in Nuemiller. The Examiner also admits multiple other claim features are missing from Nuemiller.

Liu And Nuemiller Lack The Claimed First And Second Threshold Comparisons

Liu maintains network configuration hierarchy information, establishes routes, and transfers information between nodes in ad-hoc data communication networks with on-demand multicast and unicast techniques using controlled flooding. Figure 4 shows adding a new neighbor sender to a new neighbor list.

Like Nuemiller, Liu lacks the claimed first and second predetermined signal strength threshold comparisons. Liu compares the value of a beacon status message counter to a

threshold value, and depending on the result, the counter continues to count or a node processor determines that new neighbors may have been discovered or that a neighbor set has changed. See col. 14, lines 47-62. But the message count threshold comparison in Liu is not comparing signal strengths with first and second signal strength thresholds. Nor is the message count comparison used to decide how to differently handle nodes already listed in the table and nodes not listed in the table.

The Advisory points to claim 7 in Liu which recites:

a plurality of communication units are each connected to one or more communication links, and the predetermined algorithm determines whether the receiving communication unit is connected to a greatest number of links with a quality exceeding a threshold from among said one or more communication units configured to broadcast a message to each of the receiving communication unit's first tier neighbors.

First, it is not clear where the content of claim 7 is described in the Liu specification. Second, even assuming this claim 7 text is correct, (which remains to be demonstrated), it simply describes determining whether to retransmit the broadcast message based on whether the receiving unit is connected to “a greatest number of links with a quality exceeding a threshold.” There is only one threshold, rather than two, and it has nothing to do with whether to add or discard a communications unit from a Liu's neighbor list.

Balogh Does Not Remedy the Deficiencies in Nuemiller and Liu

Balogh describes selecting a first access point that has “the same network name as the currently serving access point” and a second access point with “a different network name.” The “connection attributes” of the first and second access points are compared, and signal level is one connection attribute. Neither the final rejection nor the advisory action identify what specifically in Balogh corresponds to the claimed first and second predetermined signal strength thresholds.

The final action contends that Balogh describes determining if the second node is already listed in a table in the first node, referring to [0007]-[0009] and [0035]. None of these paragraphs discloses a table or determining if a second node is already listed in a table. Rather, they describe trying to keep a roaming mobile terminal in “the same network as long as possible” [0007]-[0009] and a mobile terminal scanning access points and other mobile terminals [0035].

The advisory action argues that the claimed table corresponds to “deciding which access point to use in order to access a network.” A person of ordinary skill in the art would not reasonably equate these two different things. The claimed table is a list of nodes that can be used for forwarding messages in a network. Balogh’s terminal is simply trying to find the best access point to access the network.

Balogh discusses signal strength comparison in [0010]: “Yet in one embodiment of the invention, the connection attributes are determined based on signal levels of available access points. The first and the second access point having the highest signal levels are selected. The signal levels of the first and the second access point are compared and it is checked if the difference of signal levels of the first access point and the second access point is above the pre-determined signal level limit.” Accordingly, it is that difference between two signals that is compared to the limit to select the closest access point. In contrast, it is the signal strength of just one signal, the first signal, that is compared to one of two different thresholds depending on whether the second node is listed in the table maintained by the first node or not. This feature is not in Balogh. Performing one relative comparison where the signal strengths of a first access point signal and a second access point signal are compared to each other, as in Balogh, is not the same as performing two separate and different comparisons using two different thresholds, as claimed.

The Examiner also identifies paragraph [0050] and the “second access point with better connection attributes” in Balogh as allegedly teaching “if the second node is not listed in the table maintained by the first node, comparing the signal strength of the first signal to a second predetermined signal strength threshold greater than the first predetermined signal strength threshold.” Understandably, the Examiner makes no attempt to map any teaching in Balogh to the following claim steps of “if the signal strength of the first signal exceeds the second predetermined signal strength threshold, adding the second node to the table, and if the signal strength of the first signal does not exceed the second predetermined signal strength threshold, discarding the first signal and continuing to not list the second node in the table” because Balogh does not teach them.

The panel is urged to review paragraph [0050] describing a user interface which allows a user to accept a new connection. There is no teaching in [0050] of any predetermined threshold comparison levels, let alone of the two separate comparisons to the first and second

predetermined signal strength thresholds where the second predetermined signal strength threshold is greater than the first predetermined signal strength threshold.


In addition to all three references lacking the claimed comparisons to the claimed first and second predetermined signal strength thresholds, none of those references teaches or suggests determining which one of the two threshold comparisons to make depending on whether a node is currently listed on a routing list or not.

The Cited Text in Nuemiller Does Not Describe the Features in Dependent Claims 7 and 8

Regarding the rejection of claims 7 and 8, the Examiner references col. 7, line 10-col. 8, line 9 of Nuemiller. Claims 7 and 8 recite: "wherein the first and second predetermined signal strength thresholds correspond to first and second predetermined signal-to-noise ratios (SNRs)." The only text that in this section from Nuemiller that discusses signal-to-noise ratio, col. 7, lines 59-66, simply describes the signal-to-noise ratio of the channel being used. There is no teaching of first and second predetermined signal-to-noise ratios (SNRs) being first and second predetermined signal strength thresholds.

The final rejection should be withdrawn and the case allowed.

Respectfully submitted,
NIXON & VANDERHYE P.C.

By: 
John R. Lastova
Reg. No. 33,149

901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000